50. The golf ball of claim 48 wherein said polyol is an ether glycol.

51. The golf ball of claim 48 wherein said diisocyanate is selected from the group consisting of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, Isophorone diisocyanate and mixtures thereof.

E4 (mcd)

52. The golf ball of claim 51 wherein the polyol is polyoxytetramethylene ether glycol.

**REMARKS**

Applicant appreciates the Examiner's review of the present application and respectfully requests reconsideration in light of the amendments and the following remarks.

The molecular weight disclosed in the specification is broad enough to cover all means that one skilled in the art would calculate molecular weight, but it was intended to describe that of weight average, which is the more useful measurement used by one skilled in the art of polymers than molecular number average. Enclosed is a **declaration by Mr. Kuttuppa** that clarifies what the applicants meant by molecular weight for the polyol.

MARKED UP CLAIMS

30. (Fourth Amendment) A golf ball comprising:

(a) a core; and

(b) a finished golf ball cover formed by casting having a Shore D hardness of 50D to 65D, wherein said cover being a polyurethane formed [without the use of catalysts] from the reaction products of:

a liquid polyurethane comprising:

(1) a diisocyanate wherein said diisocyanate is selected from a group consisting of toluene diisocyanate , 4,4'-diphenylmethane diisocyanate, Isophorone diisocyanate and mixtures thereof;

(2) a polyol having a molecular weight of about 650-3000 wherein said polyol is an ether glycol; and,

(3) a curing agent consisting of:

(A) a first diamine dimethylthio-2,4-toluenediamine; and,

(B) a second diamine diethyl-2,4-toluenediamine

wherein said liquid polyurethane is poured into a pair of mating finished mold halves forming the finished golf ball in a single molding operation.

40. (Twice Amended) A golf ball comprising:

a core comprising a center and thread layer wherein said core has a diameter from about 1.48" to about 1.62"; and,

a finished polyurethane cover having a Shore D hardness of 50D to 65D formed completely in the same mold in a single molding operation cycle from liquid polyurethane prepolymer reactants within a single mold comprising:

(a) (1) a diisocyanate selected from the group consisting

of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, Isophorone diisocyanate and mixtures thereof, and

(2) [a] an ether glycol polyol having a molecular weight of about 650-3000; and,

(b) a curing agent comprising:

(1) dimethylthio-2,4-toluenediamine; and,

(2) diethyl-2,4-toluenediamine.

43. (Fourth Amendment) A golf ball comprising:

a center comprising 100 PPHR cis polybutadiene rubber, 20 PPHR zinc acrylate salt, 24.5 PPHR barium sulfate, 6 PPHR zinc oxide, 3 PPHR zinc sterate and 2.1 PPHR 1,1-di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane;

a thread layer winding comprised of polyisoprene rubber; and

a cast finished golf ball cover formed in a single molding operation from liquid reactants, having a Shore D hardness of 50D to 65D comprising the reaction product of a liquid polyurethane comprising 100 PPHR of toluene diisocyanate and polyoxytetramethylene ether glycol that forms a prepolymer with an NCO content of about 5.5% to 8.0% by weight of said prepolymer, said prepolymer is further reacted with 13.2 PPHR of a curative comprising diethyl-2,4-toluenediamine and dimethylthio-2,4-toluenediamine at a 50:50 weight ratio and 2.3 PPHR pigment so that the overall ball diameter is about 1.68"

wherein said liquid polyurethane is poured into a pair of mating finished mold halves forming the finished golf ball.

44. (Twice Amended) A golf ball comprising:

(a) a core; and

(b) a finished golf ball cover having a Shore D hardness of 50D to 65D, said cover being a polyurethane formed from the reaction products of a liquid polyurethane in a single molding operation comprising:

(1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, Isophorone diisocyanate and mixtures thereof;

(2) a polyol having ether groups, wherein said polyol has a molecular weight of about 650-3000; and,

(3) a curing agent comprising:

(A) a first diamine substituted toluene wherein said first diamine substituted toluene has amine groups which are stericaly or electronically hindered; and,

(B) a second diamine substituted toluene having no interference with its amine group, wherein said first diamine substituted toluene has greater hindrance of its amine group than said second substituted toluene diamine's amine group, wherein said liquid polyurethane is poured into a pair of mating finished mold halves forming the finished golf ball.

48. (new) A golf ball comprising:

a core;

a cover comprising a blend of:

(c) a polyurethane prepolymer comprising:

(1) a diisocyanate;

(2) a polyol;

(d) a curing agent comprising:

(1) a hindered diamine; and,

(2) an unhindered diamine;

wherein the polyurethane prepolymer and curing agent are selected such that a post-cure temperature for the golf ball is between about 72° F and 102°F, and a post-cure time for the golf ball is between about 8 to 16 hours.

49. The golf ball of claim 48 wherein said cover blend has a pot life of 55-70 seconds.

50. The golf ball of claim 48 wherein said polyol is an ether glycol.

51. The golf ball of claim 48 wherein said diisocyanate is selected from the group consisting of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, Isophorone diisocyanate and mixtures thereof.

52. The golf ball of claim 51 wherein the polyol is polyoxytetramethylene ether glycol.

Conclusion

In light of the prior art and phone conference applicant believes all claims as written and now amended in the instant invention are allowable. Reconsideration and allowance are requested.

Respectfully submitted,

Jeffrey D. Washville Dated: 23AUG02
Reg. No. 46,366

440 Commercial Street
Boston, MA 02109
Tel.: (617) 227-0700
FAX: (617)723-4609

Certificate of Mailing

The undersigned hereby certifies that this paper along with any paper or document referred to therein as being attached or enclosed, is being deposited with the United States Postal Service via First Class Mail, Postage Prepaid, service under 37 C.F.R. §1.8, in an envelope addressed to the Assistant Commissioner for Patents, Box AF, Washington D.C. 20231- This 21st day of August 2002.

**Jeffrey D. Washville**